Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A system for levitating workpieces comprising:

a support structure that includes a work surface having a plurality of supply openings distributed among a plurality of exhaust openings, said work surface having raised regions at said exhaust openings; and

source means in communication with said supply openings for supplying a continuous flow of fluid through said supply openings at a pressure selected to levitate a workpiece that is adjacent to said work surface, said exhaust openings being maintained at a pressure that enables a reverse flow of said fluid into said exhaust openings.

2. (currently amended) The system of claim 1 wherein said raised regions surround said exhaust openings, said raised regions being planar along surfaces generally parallel to said workpiece during levitation, said surfaces being above said work surface of said support structure.

3. (original) The system of claim 1 wherein said work surface has an array of supply openings associated with each said exhaust opening.

4. (original) The system of claim 2 wherein said pressure at said exhaust openings is maintained such that said exhaust openings have an exhaust capacity which exceeds a supply capacity of said continuous flow through said supply openings.

5. (original) The system of claim 1 further comprising means for forming a partial vacuum at said exhaust openings.

6. (original) The system of claim 1 further comprising inspection means for optically inspecting said workpiece that is adjacent to said work surface.

7. (original) The system of claim 1 wherein said support structure includes a plurality of pressure chambers and a plurality of vacuum chambers, said pressure and vacuum chambers extending in parallel fashion along a lower side of a wall, said work surface being an upper side of said wall, each said pressure chamber being connected to a subset of said supply openings and to said source means, each said vacuum chamber being connected to a subset of said exhaust openings.

8. (original) The system of claim 1 wherein said supply openings have a smaller cross sectional area than said exhaust openings and wherein said supply openings outnumber said exhaust openings.

9. (original) The system of claim 1 further comprising pneumatic means for applying positive gas pressure to said workpiece in a direction opposite to said supply openings.

10. (original) A method of manipulating workpieces comprising the steps of:

positioning a workpiece adjacent to a work surface having a plurality of openings, including supply openings and exhaust openings interspersed within an area of said workpiece;

projecting gas through said supply openings at a positive pressure sufficient to position said workpiece in spaced relationship from said work surface; and

forming a negative pressure at said exhaust openings to evacuate said gas from between said workpiece and said work surface, including establishing an equilibrium condition in which said positive and negative pressures cooperate to maintain said workpiece in a position of substantially uniform spacing from said work surface.

11. (original) The method of claim 10 further comprising a step of optically inspecting said workpiece.

12. (original) The method of claim 10 wherein said step of positioning said workpiece includes locating a generally planar member adjacent to a work surface having a plurality of supply openings and having a plurality of exhaust openings, each exhaust opening being surrounded by a raised region of said work surface.

13. (original) The method of claim 12 wherein said step of establishing said equilibrium condition includes utilizing said raised regions and exhaust openings as pinch valves.

14. (original) The method of claim 10 wherein said step of positioning said workpiece includes locating a continuous web of flexible material adjacent to said work surface, said work surface being substantially planar with raised regions surrounding said exhaust openings.

15. (original) The method of claim 10 further comprising a step of applying a flow of air on a side of said workpiece opposite to said work surface, thereby pressing said workpiece toward said work surface.

16. (currently amended) An inspection system comprising:

a support structure for positioning an item of interest, said support structure having a generally planar work surface with at least four alternating arrays of supply openings and exhaust openings~~, said exhaust openings being surrounded by raised regions having planar top surfaces~~;

air pressure control means for establishing a positive pressure flow from each of said supply openings and establishing a negative pressure flow to each of said exhaust openings, thereby providing an equilibrium condition with respect to pneumatically supporting said item of interest in spaced relation from said work surface, said air pressure control means being connected to control levels of vacuum pressure at ends of said exhaust openings opposite to said item of interest; and

inspection means for optically inspecting said item of interest when said item of interest is positioned by said support structure.

17. (original) The inspection system of claim 16 wherein said support structure includes parallel positive pressure chambers and negative pressure chambers arranged in an alternating fashion, each said positive pressure chamber being in communication with an associated array of supply openings, each said negative pressure chamber being in communication with an associated array of exhaust openings, said air pressure control means and said supply and exhaust being cooperative to retard lateral flow from said supply openings to edges of said item of interest.

18. (original) The inspection system of claim 17 wherein said support structure includes raised regions at said exhaust openings and includes depressed regions along said supply openings.

19. (original) The inspection system of claim 17 wherein said supply openings are smaller than said exhaust openings and wherein said supply openings outnumber said exhaust openings.

20. (cancelled)

21. (new) The inspection system of claim 16 wherein exhaust openings are surrounded by raised regions having planar top surfaces.